

## **Nanowire Optoelectric Switching Device and Method**

### **ABSTRACT OF THE DISCLOSURE**

A nanowire switching device and method. The device has a nanowire structure comprising an elongated member having a cross-sectional area ranging from about 1 nanometers but less than about 500 nanometers, but can also be at other dimensions, which vary or are substantially constant or any combination of these. The device also has a first terminal coupled to a first portion of the nanowire structure; and a second terminal coupled to a second portion of the nanowire structure. The second portion of the nanowire structure is disposed spatially from the first portion of the nanowire structure. An active surface structure is coupled to the nanowire structure. The active surface structure extends from the first portion to the second portion along the elongated member.

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